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ABSTRACT

An employer needs assessment survey was administered to the business/industrial community in the service area of Tri-County Technical College (TCTC) to determine the need for TCTC graduates in various fields, employers' evaluation of TCTC graduate employees, and any trends or changes in local job market. All major industries listed in the 1978 South Carolina Industrial Directory were surveyed; 219 (94%) firms responded and an additional 250 small businesses participated. The survey questionnaire and interviews addressed only those jobs that required education typically provided by two-year technical colleges. Results indicated that local population growth and employment rates had exceeded national trends, and that manufacturing remained the primary source of employment. While no general manpower shortage was indicated, it was expected that the local labor supply would be exceeded by demands for highly skilled workers in non-textile manufacturing, particularly in the computer and data processing fields. TCTC-trained employees maintained good to excellent employment records but industry encouraged more supervisory, public relations, and communication skills training. Student enrollment in TCTC was expected to continue to rise due to limited opportunities in the area for liberal arts graduates. (DR)

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Survey of the Employment Needs of Business and Industry in Anderson, Oconee, and Pickens Counties

EXECUTIVE SUMMARY

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PURPOSE OF THE EMPLOYER NEEDS ASSESSMENT

The Employer Needs Assessment was an attempt to obtain maximum involvement on the part of the business/industrial community of Tri-County TEC's service area. It provided a mechanism for employers to indicate their manpower requirements, and it allowed evaluations of various educational programs offered by Tri-County TEC. The survey allowed the collection of both quantitative data for job market analyses and qualitative data for the improvement of instruction and the college's relationship with the total business/industrial community of Anderson, Oconee, and Pickens counties.

The needs assessment will augment information that is provided by TEC's industrial representative, as well as that being given systematically by advisory committees, and will contribute to:

-- the direct involvement of the business/industrial community in establishing the educational priorities of Tri-County TEC;

-- the determination of discrepancies between educational needs of the community and TEC services/programs that are presumably addressed to those needs;

-- the collection of opinions and attitudes thward TEC that may be of value in attempts to modify and strengthen goals and educational programs of the college;

-- the establishment of direct, personal communication links among area employing organizations and TEC so that information about community needs and institutional capabilities can be exchanged;

-- the determination of whether undertraining or overtraining of persons has occurred for various occupational categories within the three-county area;

--the determination of whether too many or too few trained personnel have been produced in selected occupations;

-- the determination of whether actual demands for selected trained personnel for jobs in the three counties have been met;

-- the determination of whether inadequately or improperly prepared

future employees have trained at TEC.

METHODOLOGY

Standard survey research procedures were used in the Employer Needs Assessment. All industries listed in the 1978 South Carolina Industrial Directory (Anderson, Oconee, and Pickens counties) were invited to participate. Of these major industries, 94% (219 firms) participated. The following breakdown of participating firms by county is provided:

County	Firms Interviewed
Anderson	122
Oconee	38
Pickens	59
TOTAL	219

Moreover, 250 additional small businesses participated (e.g., less than 25 employees). These firms were selected at random from local directories. They included medical clinics, real estate firms, automotive service centers, veterinarians, utility companies, police departments, nursing homes, libraries, social agencies, and a host of other agencies and firms for which Tri-County TEC and area Vocational Educational Centers train employees. In all, 469 local firms and agencies participated.

While both on-site interviews and mailed questionnaires were used in the Employer Needs Assessment, 94 percent of the firms listed in the South Carolina Industrial Directory were interviewed at plant sites by trained interviewers.

The survey was limited to jobs that require education that is 1) beyond that normally provided on the job, 2) comparable to that provided by two-year technical colleges, and 3) of less than a baccalaureate degree.

TRENDS

As a result of examinations of data already recorded that pertain to the area's papulation, economy, employment, education, and geography, a number of noteworthy trends became apparent. These data confirmed some anticipated trends in the labor market and, at the same time, provided indicators of new developments that might influence the modification of existing vocational and technical training programs.

Some major trends are enumerated below:

-- Although the area remains rural, the papulation is steadily growing and is rapidly becoming more heterogeneous.

-- In very recent decades, Anderson, Oconee, and Pickens counties have moved from an agrarian to a manufacturing economy.

-- About half of the employees in the three counties of the college's service area are working in manufacturing industries, with textiles and apparel continuing to dominate. A large proportion of households within the service area have someone employed in manufacturing of one type or another.

-- Presently, the service area does not have a critical general manpower shortage; however, results of the survey indicate that there is a shortage of highly-skilled and technically-trained manpower in certain occupational categories for which employment opportunities were limited until recently. Furthermore, these shortages could become accute as existing firms expand and as new industries move into the service area.

--For the forseeable future, manufacturing will continue to be the primary source of income for residents of the tri-county area.

-- Based upon present and predicted demands for personnel in higher-paying occupational categories, more residents of Anderson, Oconee, and Pickens counties can be expected to move into higher absolute dollar income brackets by 1985.

-- Within the service area, population growth and employment have exceeded national trends in recent years. From all available indications, both of these will also outpace the nation during the greater part of the coming decade.

-- Stimulated by the availability of additional income resulting from industrial growth and expansion in the service area, employment in the trades and services can also be expected to increase. White-collar jobs also appear to be growing, making a recognizable dent in the traditional reservoir of of blue-collar manpower in Anderson, Oconee, and Pickens counties.

-- Local labor supply will be exceeded by demands for highly-skilled workers in non-textile manufacturing.

-- Assuming participation rates continue at the current average, student enrollment in two-year colleges is expected to increase between the present time and 1985. The trend will be felt particularly in two-year public institutions of higher education. The increasing representation of women in higher education enrollment is also expected to continue in the foreseeable future. College enrollment is also expected to be affected by an increasing awareness among many people that numerous job opportunities in our technological society require special training beyond that offered by high schools.

-- As a result of limited employment opportunities for liberal arts college graduates, student enrollment in career instruction in both 2- and 4-year colleges is likely to continue to rise in the immediate future.

FINDINGS

The matrix in the appendix summarizes some of the findings of the survey. The findings take into consideration only the present and five-year projected needs of existing businesses and industries

and do not include those of firms that may be established within the area in the future.

Within the service area of Tri-County Technical College, the scope of work for over 124 occupational categories is expected to increase in the next five years. More than 120 firms have experienced shortages in attempts to lacate trained manpower in one or more of 124 occupational categories.

The survey revealed the need for additional training in the area to meet the manpower needs of the following occupations:

Anderson County --machinists, welders, finish carpenters, maintenance mechanics, textile workers, clerical workers.

Oconee County-- sewing machine operators, management trainees, service industries (restaurants, janitorial firms, etc.), carpenters, bricklayers, construction equipment operators, highly skilled clerical workers.

Pickens County-- machinists, sering machine operators, welders. pipefitters, textile workers, construction carpenters, fast-food restaurant operators, managers.

A battery of questions aimed at determining employers' attitudes toward Tri-County Technical College and the training programs of the college turned up the following:

--Most employers are familiar with the training at TEC.

--Most major firms employ personnel trained by the college.

--Firms that do not employ TEC graduates indicate the firm does does not have a demand for a particular kind of TEC-trained employee.

--Most TEC-trained employees have good to excellent work habits.

--Most TEC-trained employees are well-trained for expected job skills.

--The future looks good to very good in the three counties for TEC-trained technicians.

--Most TEC-trained employees received their jobs because of their training and will also advance because of their training.

--Most TEC-trained employees got their jobs on their own initiative.

--Overall quality of work done by TEC-trained employees was rated as good with most of them receiving good ratings for being able to follow directions, accepting responsibilities, being punctual, and maintaining good attendance records.

SOME TYPICAL COMMENTS MADE BY EMPLOYERS

"TEC students need more training in meeting and dealing with the public."

"Persons also needed who have the clerical skills with emphasis on the human element in the work environment."

"One of our employees is presently a TEC student. I am very happy with the progress of this employee. This business was essentially a one-man operation until the addition of this TEC student."

" TEC students are well-trained, but they need more instruction about human relations. A course for supervisory training is also needed."

"We feel the need for trained technical personnel in engineering."

"We hired two people that were TEC-trained. They were the best that could be found anywhere."

"Mechanically-inclined blueprint readers are needed by this firm."

"We use TEC graduates in positions from machine operators to highly-skilled technicians and supervisors."

"Writing and communication skills should be stressed in all of TEC's existing programs."

"Your Employer Needs Survey is nery much needed."

CONCLUSIONS

A compilation of all responses to the questionnaires and individual interviews leads to the following conclusions:

--Proportionately, employment in non-textile manufacturing has increased in recent years. Correspondingly, employment in the trades and services has also increased. The demand for non-textile labor is increasing. Furthermore, from all indications, textile industries within Anderson, Oconee, and Pickens counties will continue to rely primarily upon existing technology. Within non-textile industries, employment frowth will continue to rise. Thesefore, increasing demands will be made for new technical skills, many of which are not currently widely available in the local labor market.

--It is apparent as a result of the survey that, to meet existing needs of many industries in the tri-county area, considerable imporvements must be made to upgrade the level of Tri-County TEC's technical instruction particularly in regard to equipment and training facilities.

--One of the implications of the survey data is that more cooperation among the TEC institutions is needed in the allocation of state fends so that equipment and resources can be concentrated in geographic areas where full levels of technological training are needed. More direction from the

state level might be required in the future so that the full range of competencies (required job skills) for a given technology can be more readily identified. In addition, with more direction from the state level, critical areas where highly sophisticated technological training is needed can be more readily identified.

--Many industries recognize the value of cooperative education whereby students spend part of their educational edperience in formal classroom and laboratory instruction and part in on-the-job training.

--The service area contains an inestimable wealth of knowledge and experitse on the part of business and industrial leaders, many of whom are eager to share their talents for the advancement of Tri-County TEC. The role of advisory committees is becoming increasingly important in an age of rapid technological advancement and industrial growth.

--A new labor market has emerged in recent years in the tri-county area for technicians in the computer sciences.

--Although Tri-County Technical College has provided and continues to provide trained manpower for Anderson, Oconee, and Pickens counties, certain areas of the college's curriculum are in need of careful re-evaluation and improvement.

--To improve faculty performance and pruductivity, systematic assessments of the college's training (outcomes and impact) should be made. In these assessments, student evaluations of

instructors and instruction are very important.

--Because of the relatively low educational attainment level within the tri-county area, additional special emphasis should be placed on non-traditional alternatives for learning at Tri-County TEC. This emphasis is important so that the basic communication and reasoning skills of deficient students can be upgraded to a level demanded by our contemporary technological age.

--As a result of the faculty/staff survey conducted in late 1978, it was discovered that 94% of the faculty/staff feel business and industry should be very involved in planning, development, and evaluations of TEC's educational programs.

--Ninety-two percent of the Tri-County TEC faculty/staff feel that the college has made a definite contribution to the elevation of educational levels in Anderson, Oconee, and Pickens counties.

RECOMMENDATIONS

--Increase efforts to devise more thorough and more uniform methods to evaluate the quality of instruction and the performance of instructors.

--Develop a more viable and comprehensive counseling and guidance program for students of the college.

--Explore the feasibility of establishing a training program for computer operators and data processors. Many local industries currently recognise the need for personnel trained in these areas. It is apparent that the utilization of computers in many local firms is growing in all three counties.

--Continual monitoring of the community is recommended. This is especially important at a time when Tri-County Technical College must

respond to trends in enrollment and rapid growth, innovation, and development within the business and industrial community. The institution should continue to evaluate, on a periodic basis, the extent to which its educational programs meet the needs of students and industry in the service area.

--Whenever possible, additional programs of cooperative education should be established with local businesses and industries. These programs will eliminate the criticisms of some employers who felt that more on-the-job training would add depth to occupational preparation.

--Increased emphasis should be placed on the maximum use of advisory committees for instructional programs.

--Instructors should be given and should take advantage of additional opportunities to keep abrease of technological advances being reflected in area firms that employ Tri-County TEC graduates. In this respect, faculty and staff members should be encouraged to take advantage of all opportunities--both formal and informal--to upgrade the level of their technological knowledge and skills, as well as to improve their knowledge of new methods and material for effective instruction.

--The results of the Employer Needs Assessment will be outlined more thoroughly in the final report of the project. The findings should be used extensively to improve individual instructional programs; defined weaknesses should be corrected as soon as economically feasible. Efforts should be made to improve instruction in the areas of radio/TV, secretarial science, supervisory training, real estate, and general education. Special attention should also be focused on the need for additional and more thoroughly trained personnel in the

areas of automotive mechanics, auto body repair, electronics engineering technology, machine tool technology, welding, secretarial science, and management.

--As the industrial structure of employment changes within the service area, Tri-County TEC should eliminate training programs directed toward declining occupational areas and strengthen those programs in which shortages of trained manpower exist as a result of re-distributions among business and industrial occupations. For example, as the need in the service area for blue-collar craftsmen, operators, service workers, and laborers declines to the national level and as the need for white-collar personnel continues to rise within the local service area to that of the national average, additional emphasis should be placed at TEC upon the training of clerical, sales, para-professional, and managerial personnel.

--Make additional efforts to recruit more women, minority, ethnic, and older students, placing emphasis on training for employment. Also focus additional attention on career-oriented training for persons in the service area who have already obtained a liberal arts education but who cannot currently find work because of limited employment opportunities for persons without need job skills.

--It is highly recommended that Tri-County Technical College carefully review the plan devised by the State Board for Technical and Comprehensive Edcuation and entitled "Design for the 80's." This concept appears to offer some viable alternatives for training in high technologies--opportunities that cannot presently be offered at the local level because of fiscal and physical constraints.

--Explore the possibility of conducting additional short-term, in-service upgrading programs, specialized refresher courses, workshops and institutes for personnel who are already employed in business

and industry. From the results of the Employer Needs Assessment, it is apparent that many personnel officers in business and industry feel the need for various occupation-oriented upgrading courses conducted by TEC. A complete list of recommended subject areas for such training will be included in the final report of the project.

--More emphasis should be placed at all levels of instruction on the problem of product and quality-control in industry.

--Because of the increasing utilization of plastics and related materials and the recent development of plastics industries in the tri-county area, develop training programs for tool and die operators in the plastics field and for plastics injection molding.

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OCCUPATIONAL CATEGORY	SHORTAGE OF LOCAL SUPPLY OF TRAINED MANPOWER (# OF INDUSTRIES REPORTING SHORTAGES	# OF PERSONS CURRENTLY EMPLOYED IN OCCUPATIONAL CATEGORY WHO DID NOT HAVE MINIMUM CERTIFICATION OR EDUCATION NEEDED FOR THE JOB	ADD'L FULL-TIME PERSONNEL NEEDED TO PROVIDE OPTIMUM CARE FOR PRESENT SERVICE LEVEL	APPROX. # OF PERSONNEL NEEDED BY JULY 1985 FOR ANTICIPATED SERVICE LEVEL	WITHIN THE NEXT 5-YEAR PERIOD, THE SCOPE OF WORK IS EXPECTED TO INCREASE (# INDUSTRIES)
All-Round Machinists	29	126	36	417	26
Machine Tool Operator	6	425		68	6
Set-up Workers (Machine Tool)	4	3	48	41	8
Tool and Die Makers	11	31	214	106	13
Printing Pressmen	3	2	1	27	6
Electro-platers	4	22	12	25	5
Industrial Foremen & Supervisory Personnel	10	200	14	121	25
Millwrights	5	12	5	45	11

OCCUPATIONAL CATEGORY	SHORTAGE OF LOCAL SUPPLY OF TRAINED MANPOWER (# OF INDUSTRIES REPORTING SHORTAGES	# OF PERSONS CURRENTLY EMPLOYED IN OCCUPATIONAL CATEGORY WHO DID NOT HAVE MINIMUM CERTIFICATION OR EDUCATION NEEDED FOR THE JOB	ADD'L FULL-TIME PERSONNEL NEEDED TO PROVIDE OPTIMUM CARE FOR PRESENT SERVICE LEVEL	APPROX. # OF PERSONNEL NEEDED BY JULY 1985 FOR ANTICIPATED SERVICE LEVEL	WITHIN THE NEXT 5-YEAR PERIOD, THE SCOPE OF WORK IS EXPECTED TO INCREASE (# INDUSTRIES)
Welders & Flamecutters	6	51	5	60	13
Bookkeeping Workers	12	25	3	78	34
Office Machine Operators	1	1	1	34	10
Shipping & Receiving Clerks	8	47	4	118	23
Stenographers & Secretaries	20	106	9	217	63
Computer Programers	8	8	3	29	16
Police Officers	8		12	55	6
Truck & Bus Mechanics	6	8	10	23	4

OCCUPATIONAL CATEGORY	SHORTAGE OF LOCAL SUPPLY OF TRAINED MANPOWER (# OF INDUSTRIES REPORTING SHORTAGES	# OF PERSONS CURRENTLY EMPLOYED IN OCCUPATIONAL CATEGORY WHO DID NOT HAVE MINIMUM CERTIFICATION OR EDUCATION NEEDED FOR THE JOB	ADD'L FULL-TIME PERSONNEL NEEDED TO PROVIDE OPTIMUM CARE FOR PRESENT SERVICE LEVEL	APPROX. # OF PERSONNEL NEEDED BY JULY 1985 FOR ANTICIPATED SERVICE LEVEL	WITHIN THE NEXT 5-YEAR PERIOD, THE SCOPE OF WORK IS EXPECTED TO INCREASE (# INDUSTRIES)
Medical Lab Workers	1	24		28	6
LPN	5		1	28	11
Wastewater Treatment Plant Operators	5		1	18	6
Automobile Mechanics	12	24	22	81	15
Diesel Mechanics	3	11	4	12	5
Industrial Machine Repairers	5		1	43	11
Maintenance Electricians	13	53	57	217	24
Electricians (Construction)	6	9		45	6

OCCUPATIONAL CATEGORY	SHORTAGE OF LOCAL SUPPLY OF TRAINED MANPOWER (# OF INDUSTRIES REPORTING SHORTAGES	# OF PERSONS CURRENTLY EMPLOYED IN OCCUPATIONAL CATEGORY WHO DID NOT HAVE MINIMUM CERTIFICATION OR EDUCATION NEEDED FOR THE JOB	ADD'L FULL-TIME PERSONNEL NEEDED TO PROVIDE OPTIMUM CARE FOR PRESENT SERVICE LEVEL	APPROX. # OF PERSONNEL NEEDED BY JULY 1985 FOR ANTICIPATED SERVICE LEVEL	WITHIN THE NEXT 5-YEAR PERIOD, THE SCOPE OF WORK IS EXPECTED TO INCREASE (# INDUSTRIES)
Plumbers & Pipefitters	1	24		32	8
Drafting	5		2	40	14
Engineering Science Technicians	1	36	15	71	11
Automobile Body Repairers	8	14	22	54	10
Real Estate Sales-Workers & Brokers	2	4	1	49	7
Industrial Machinery Repairers	5		1	11	43